

CLAIMS

1. An external programming device (10) for an implant (100) such as a cardiac pacemaker, defibrillator or the like,

comprising a transmitting and receiving unit (102, 104) for receiving data on the part of the implant (100), and transmitting data to the implant (100), and

a display (72) with a display control unit (106) which are adapted to display representations of transmitted and/or received data and are connected to the transmitting and receiving unit (102, 104), and

a power supply unit,
characterized in that

the external programming device (10) is made up in a modular fashion from at least one autonomous hand device (14) and at least one base device (12) in such a way that

the hand device (14) includes the transmitting and receiving unit (102, 104) and as well as the display (72) and the display control unit (106) and a mains-independent chargeable power supply (122) and a power supply interface and a data interface (116), and

the base device (12) includes a second power supply interface compatible with the power supply interface of the hand device (14) and a second data interface (132) compatible with the data interface (116) of the hand device (14),

in such a way that the hand device (14) can be selectively electrically and mechanically coupled to the base device (12) or separated from the base device (12) and used autonomously, wherein the chargeable power supply (122) of the hand device (14) is to be charged up by way of the power supply interface by the base device (12) when the hand device (14) is coupled to the base device (12).

2. A programming device (10) as set forth in claim 1 characterized in that the hand device (14) has a data memory (112) which is connected on the one hand to the transmitting and receiving unit (102, 104) and is adapted for autonomous storage of data transmitted from the implant

(100) or to the implant (100) and which on the other hand is connected to the data interface (116) of the hand device (14) in such a way that data are to be at least unidirectionally transmitted from the data memory (112) by way of the data interfaces (116, 132) to the base device when the hand device (14) is coupled to the base device (12).

3. A programming device (10) as set forth in claim 2 characterized in that the base device (12) has a printer interface (134) or a printer (120) for printing out representations corresponding to the data in the data memory (112) of the hand device (14).

4. A programming device (10) as set forth in claim 3 characterized in that the hand device (14) includes a control unit (108) which is connected and adapted to detect a coupled condition of the hand device (14) and in response to detection of the coupled condition to produce a communication between the transmitting and receiving unit (102, 104) of the hand device (14) and the printer interface (134) of the base device (12) in such a way that data received on the part of the implant (100) from the transmitting and receiving unit (102, 104) can be represented in real time by way of the printer (120) or the printer interface (134).

5. A programming device (10) as set forth in claim 1 characterized in that the hand device (14) and the base device (12) each have a respective data transmitting and receiving unit (102, 104) for wireless data exchange between the hand device (14) and the base device (12).

6. A hand device (14) for a programming device (10) as set forth in one of claims 1 through 5 characterized in that the display (72) is formed by a touch-sensitive display screen (touch screen).

7. A hand device (14) as set forth in claim 6 characterized in that the hand device (14) is adapted to make a latching mechanical connection to the base device (12) and includes a release button for releasing the latching mechanical connection.

8. A hand device (14) as set forth in claim 6 characterized in that the hand device (14) has a shock triggering button (138) which is connected to and co-operates with a control unit (108) of the hand device (14) and the transmitting and receiving unit (102, 104) in such a way that the discharge of a shock by the implant (100) is to be triggered by way of the triggering button.

9. A hand device (14) as set forth in claim 6 characterized by a programming head (62) which is releasably connected to the hand device (14) by way of a flexible electrical feed line (60) and as part of the transmitting and receiving unit (102, 104) of the hand device (14) permits a telemetric communication between the implant (100) and the hand device (14) by applying the programming head (62) to the body of the patient.

10. A base device (12) for a programming device (10) as set forth in one of claims 1 through 5 characterized by a main body (26) and a mounting tilting member (22) pivotably connected to the main body (26) for mounting the hand device (14) and adjustment of the angle of inclination of the display of the hand device (14) when the hand device (14) is in the coupled condition.

11. A base device (12) as set forth in claim 10 characterized in that the mounting tilting member (22) has plug connections (20) for the data interface (116) and the power supply interface.

12. A base device (12) as set forth in claim 10 characterized in that the main body (26) of the base device (12) includes a printer (48).